

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

Please amend the claims as follows.

Listing of Claims:

1-8. (Canceled)

- 1 ~~9.~~ (Currently amended) An isolated expression vector comprising a first nucleic acid sequence that encodes a ~~WI2~~ heavy chain variable region sequence comprising the CDR-1 sequence NYWMT (SEQ ID NO:1), CDR-2 sequence SITSTGGGTYHAESVKG (SEQ ID NO:2), and CDR-3 sequence DDYGGQSTYVMDA (SEQ ID NO:3) and a second nucleic acid sequence that encodes a ~~WI2~~ light chain variable region sequence comprising the CDR1 sequence RASQDIGNYLR (SEQ ID NO:4), CDR2 sequence GATNLAA (SEQ ID NO:5), and the CDR3 sequence LHHSEYPYT (SEQ ID NO:6).
- 2 ~~10.~~ (Original) An isolated expression vector according to claim ~~9~~¹ wherein said light and heavy chains are chimeric or are humanized.
- 3 ~~11.~~ (Currently amended) A host cell comprising said expression vector according to claim ~~9~~¹.
- 4 ~~12.~~ (Currently amended) An isolated first expression vector comprising a nucleic acid sequence that encodes a ~~WI2~~ heavy chain variable region sequence comprising the CDR-1 sequence NYWMT (SEQ ID NO:1), CDR-2 sequence SITSTGGGTYHAESVKG (SEQ ID NO:2), and CDR-3 sequence DDYGGQSTYVMDA (SEQ ID NO:3) and an isolated second expression vector comprising a nucleic acid sequence that encodes a ~~WI2~~ light chain variable region sequence comprising the CDR1 sequence RASQDIGNYLR (SEQ ID NO:4), CDR2 sequence GATNLAA (SEQ ID NO:5), and CDR3 sequence LHHSEYPYT (SEQ ID NO:6).

5 ~~13.~~ (Currently amended) An isolated first and second expression vectors according to claim ~~12~~⁴, wherein said nucleic acid sequences encode a chimeric or humanized ~~W12~~ light and heavy chain.

6 ~~14.~~ (Currently amended) A host cell comprising said first and second expression vectors according to claim ~~12~~⁴.

15. (Withdrawn) A method of stimulating an immune response in a patient against cancers expressing carcinoembryonic antigen, which comprises administering to said patient an effective amount of a vaccine comprising the humanized anti-idiotypic antibody or antibody fragment encoded by the nucleic acid of claim 21, conjugated to a soluble immunogenic carrier protein, optionally in combination with a pharmaceutically acceptable vaccine adjuvant.

16. (Withdrawn) A method of diagnosis or treatment of a patient, wherein an antibody or antibody fragment that specifically binds CEA is used as a targeting, pre-targeting or therapy agent, either as an unconjugated antibody or fragment or as a component of a conjugate, wherein an anti-idiotypic antibody encoded by the nucleic acid according to claim 21 is used to clear antibody or antibody fragment that is not bound to CEA.

17. (Canceled)

18. (Withdrawn) A method according to claim 16, wherein said anti-idiotypic antibody or antibody fragment is labeled with a radiolabel, an enzyme, or a fluorescent agent.

19. (Withdrawn) A vaccine, comprising the humanized anti-idiotypic antibody or antibody fragment encoded by the nucleic acid of claim 21, conjugated to a soluble immunogenic carrier protein, for use in stimulating an immune response in a patient against a cancer characterized by expression of CEA.

7 ~~20.~~ (Currently amended) A nucleic acid encoding a chimeric anti-idiotypic antibody or fragment thereof, wherein said antibody or fragment thereof specifically binds to the idiotype

region of an anti-CEA monoclonal antibody and the chimeric anti-idiotypic antibody or fragment comprises comprising the ~~r~~WI2 light chain variable region sequence

DIQLTQSPASLPASLGDRVTITCRASQDIGNYLRFQOKPGKSPRLIYG

ATNLAAGVPSRFSRSGSDFSLTINSLESEDMAIYYCLHHSEYPYTFGIGTKLERKR

(SEQ ID NO:22) and heavy chain variable regions sequence QVQLQESGGDLVQGRSLKL

SCVASGFTFSNYWMTWIRQAPGEGLEWVASITSTGGGTYHAESVKGRFTISRDN

KSTLYLQMNSLRPEDTATYYCSRDDYGGQSTYVMDA WGQGSSVTVSS (SEQ ID

NO:18).

- 8 ~~21.~~ (Currently amended) A nucleic acid encoding a humanized anti-idiotypic antibody or fragment thereof, wherein said antibody or fragment thereof specifically binds the idiotype region of an anti-CEA monoclonal antibody and the humanized anti-idiotypic antibody or fragment comprises comprising ~~r~~WI2 CDR regions CDR-1 sequence NYWMT (SEQ ID NO:1), CDR-2 sequence SITSTGGGTYHAESVKG (SEQ ID NO:2), CDR-3 sequence
DDYGGQSTYVMDA (SEQ ID NO:3), CDR1 sequence RASQDIGNYL (SEQ ID NO:4),
CDR2 sequence GATNLAA (SEQ ID NO:5), and CDR3 sequence LHHSEYPYT (SEQ ID
NO:6) and humanized FR regions.

- 9 ~~22.~~ (Currently amended) A nucleic acid encoding an anti-idiotypic antibody or fragment thereof, wherein said antibody or fragment thereof specifically binds the idiotype region of an anti-CEA monoclonal antibody and the anti-idiotypic antibody or fragment comprises comprising
CDR-1 sequence NYWMT (SEQ ID NO:1), CDR-2 sequence SITSTGGGTYHAESVKG (SEQ
ID NO:2), CDR-3 sequence DDYGGQSTYVMDA (SEQ ID NO:3), CDR1 sequence
RASQDIGNYL (SEQ ID NO:4), CDR2 sequence GATNLAA (SEQ ID NO:5), and CDR3
sequence LHHSEYPYT (SEQ ID NO:6).